

ABSTRACT

An image sensor comprising an image sensing device layer, a silicon-on-insulator (SOI) layer, an optical device array and a substrate is provided. The SOI layer has a first surface and a second surface. The image sensing device layer is formed on the first surface of the SOI layer. The optical device array is formed on the second surface of the SOI layer. The substrate is disposed above the second surface of the SOI layer and the optical device array is disposed between the substrate and the SOI layer. An incident light coming from the outside environment, passes through the optical device array and the SOI layer, and is received by sensing devices formed in the image sensing device layer. In this manner, the probability of absorption or reflection of the incident light is reduced. Therefore, the sensing performance and the yield of the image sensor of the present invention is improved.